



**“Innovative Nanocapsules for skin care –  
Textiles & Cosmetics”**



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# PROBLEM / NEEDS

Europe is ageing



By **2060**, **one in three** europeans will be **over 65**



- ✓ Aging's **aesthetic concerns**
- ✓ Chronic and infectious **skin diseases**
- ✓ **Antimicrobial resistance**
- ✓ **Costs for healthcare** rising sharply!



EU healthcare system was responsible for spending almost **15%** of all **government expenditure in 2010**.

Eu governments face the **increasing demands from their citizens – silver economy**.



**Cosmeceutics – a strategic sector**

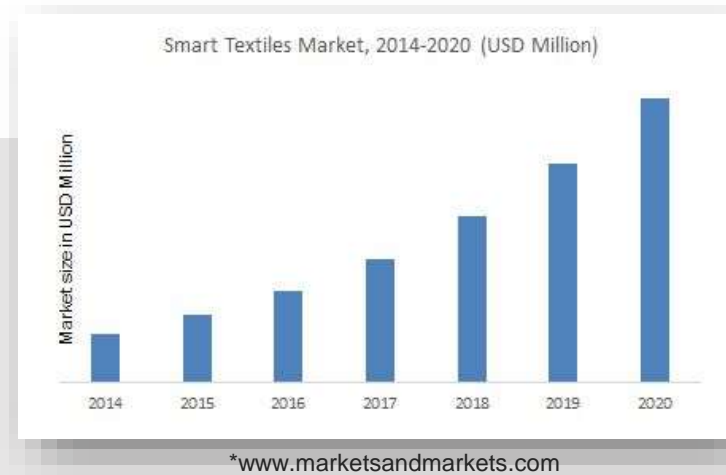
The fastest growing segment of personal care:

**\$42.4 billion by 2018**

# MARKET OPPORTUNITY

**Smart Textiles** market is expected to reach USD 4.72 billion by 2020, at a CAGR of 34% between 2015 and 2020.

**Cosmetic market** is estimated to reach USD 675 billion by 2020, at a rate of 6.4%. From this, skin care has the highest market share.



## Existing Solutions (*market competitors*) – *Nanocapsules related*:

1. **Macro or microencapsulated PCMs** on textiles for thermal comfort;
2. Nanoencapsulated **single active principles** for anti-ageing in high-end cosmetic products;
3. Antimicrobial solutions based on **silver or aggressive chemical agents** in both textiles and cosmetic products. No natural essential oils-based alternatives available.

# SKHINCAPS PRODUCTS

Cost-effective, safe, innovative and sustainable customised **NANOCAPSULES** for:

- **PCMs**, enhancing their performance in terms of thermal comfort (higher surface area → increased effectiveness);
- Combination of several **antioxidants and vitamins** in a single nanocapsule, increasing their effectiveness onto skin, for more intense and long lasting effects;
- **Natural essential oils** for antibacterial control, allowing their effective use within textiles and cosmetics products.



*We will be delivering **Cost-effective, Sustainable and Safe**  
**'Smart' Skin Care Products with enhanced properties***

1. **First layer textiles (thermal comfort) – 3 years**
2. **Anti-ageing cosmetic formulations & textiles - 5 years**
3. **Lotions & textiles for antimicrobial infections – 5 years**

# SKHINCAPS SOLUTIONS

## Nanocapsulation Proprietary Technology

- Safe, sustainable, cost-effective
- Water-based formulations
- Easy to scale up

Biocompatible,  
adhesive  
Customised  
Polymers

Encapsulation  
Technology

Natural  
Active  
Ingredients

- **No-release:** Phase-change materials (PCMs)
- **Triggered** release: Cocktail of vitamins and antioxidants
- **Targeted** release: Natural essential oils (bacteria control)

Novel, customised, safe  
Stimuli-responsive NANOCAPSULES



**'Smart' SKHINCAPS Products**  
*(textiles and cosmetics)*

# SKHINCAPS TEAM



- Carla Silva & Dora Coelho:  
**Coordination & R&D**
- Sergiy Grishchuk & Bernd Wetzel:  
**R&D**
- Tzanko Tzanov & Eva Ramon:  
**R&D**
- Catharina Hoenthal & Tiina Pajula:  
**LCA and LCC**
- Susana Sanchez & Maria Llorente:  
**Nanoencapsulation tech (SME)**
- Roberto Teixeira & Alexandre Beirão:  
**Textiles formulations (SME)**
- Diana Rivera & Laura Delgado:  
**Cosmetic formulations (SME)**
- Thomas Zdrozny & Alexandre Jeune:  
**Regulation (SME)**

# SKHINCAPS BUSINESS



## Offering stimuli responsive NANOCAPSULES for

- Functionalised Textiles for close contact with skin;
- Cosmetic formulations for human skin care.



## Product Portfolio

- Functional formulations for apparel, home, technical textiles;
- Enriched formulations for facial creams, serums, body lotions.



## Market & Customer

### Pull-through strategy

- Technical textile companies;
- Health & Beauty, Pharmacies.



## Business Proposition

- Offer innovative and cost-efficient skin care formulations;
- Customer groups (rest, health, wellness,...).



## Selling in Europe

- Different channels according to End User;
- B2B sales (direct through sales representatives; e-commerce, etc.)
- End consumer driven sales force



**We need end-users for testing & validation**

**Unique opportunity to be the first users of the 'Smart' SKHINCAPS products**

**50% discount upon acquisition of 'Smart' SKHINCAPS products during 5 years**



**Thank you for your attention.**



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